

Amendments to the Claims:

Please amend the claims as shown. Applicants reserve the right to pursue any cancelled claims at a later date.

1 – 25. (canceled)

26. (currently amended) A device for the generation or destruction of eddies in a flow medium, comprising:

a profile having a leading and a trailing edge and arranged in a flow duct having an axis of flow direction such that the flow medium flows around the profile; and

an external drive in mechanical communication with the profile and adapted to provide the profile with periodic pure translational movement back and forth along an axis perpendicular to the flow direction axis;

wherein the movement by the external drive upon the profile is effective to form finite edge vortices along the trailing edge during passage of flow medium in the flow ducts,

wherein the external drive is adapted to additionally communicate a pivoting movement of the profile that results from a rotation of the profile about an axis of rotation that is perpendicular to the flow direction of the flow medium through an angle ϕ , and

wherein the flow duct has two profiles arranged within that oscillate with the same angular frequency ω and with a phase displacement of 180 degrees in countersynchronism about their respective axes of rotation and the axes of rotation are oriented parallel to each other.

27. (currently amended) A device for the generation or destruction of eddies in a flow medium, comprising:

a profile having a leading and a trailing edge and arranged in a flow duct having an axis of flow direction such that the flow medium flows around the profile; and

an external drive in mechanical communication with the profile and adapted to provide the profile with periodic pure translational movement back and forth along an axis perpendicular to the flow direction axis; and

wherein the movement by the external drive upon the profile is effective to form finite edge vortices along the trailing edge during passage of flow medium in the flow ducts,

wherein the external drive is adapted to additionally communicate a pivoting movement of the profile that results from a rotation of the profile about an axis of rotation that is perpendicular to the flow direction of the flow medium through an angle ϕ , and

wherein the external drive comprises a first drive to effectuate the periodic translational movement back and forth along an axis perpendicular to the flow direction axis and a second drive to effectuate rotation of the profile about an axis of rotation that is perpendicular to the flow direction.

28. (canceled).

29. (canceled).

30. (previously presented) The device as claimed in claim 26, wherein the device is followed by a second profile arranged on a flow medium side, for the destruction of vortices.

31. (previously presented) The device as claimed in claim 27, wherein the device comprises a plurality of profiles that execute the periodic pivoting movement with the same angular frequency ω and the same phase and is arranged in a flow duct of a conveying zone for the transport of the flow medium.

32. (canceled)

33. (previously presented) The device as claimed in claim 27, wherein the device is located in a gas turbine.

34-42. (canceled)

43. (previously presented) An axial cascade device comprising in axial flow series:
a vortex generating row comprising a plurality of vane members each comprising a rotatable profile arranged in a flow duct such that a flow medium flows around the profile, each profile adapted to rotate about a respective axis of rotation by an external drive,
a row of stationary vanes arranged offset from a projected path of vortices generated by the respective rotatable profiles, and
a row of moving blades,
wherein the external drive rotates the respective profiles for displacement of the vortices responsive to movement of the moving blades.

44. (previously presented) The axial cascade device of claim 43, wherein the profiles are mounted on a first common connecting rod in the region of their respective trailing edges, and the first common connecting rod is in driven relationship to a second connecting rod driven in a back and forth movement by the external drive.

45. (previously presented) The axial cascade device of claim 43, wherein the vane members additionally comprise a respective stationary member disposed upstream and adjacent an upstream end of each profile.